

CLAIMS:

1. Device for recording information on a disc-shaped record carrier, the record carrier comprising a track for recording information,

the device comprising a head for scanning the track, a read unit for retrieving information from the track via the head, a write unit for recording information in the track via the head, a mode control unit for switching the device either to a read mode or to a write mode, and a rotation speed control unit for setting the rotation speed of the record carrier,

characterized in that the rotation speed control unit comprises a speed selector for selecting one of at least two speed settings for the read mode in dependence on an actual rotation speed of the record carrier during the write mode when switching from write mode to read mode, the difference in rotation speed between said actual rotation speed and the speed in the read mode being limited by said selection.

2. Device as claimed in claim 1, wherein the speed control unit is arranged for controlling the speed of the record carrier during recording according to a constant linear velocity profile.

3. Device as claimed in claim 1, wherein the speed control unit is arranged for controlling the speed of the record carrier during reading according to a constant angular velocity profile.

4. Device as claimed in claim 1, wherein the speed selector comprises a lowest speed setting for the read mode for a rotation speed substantially above the lowest rotation speed in the write mode, and/or a highest speed setting for read for a rotation speed substantially below the highest rotation speed in the write mode.

5. Device as claimed in claim 3, wherein at least a number of the speed settings are at predefined rotation frequencies having at least one predefined rotation frequency interval.

6. Device as claimed in claim 1, wherein the speed control unit is arranged for accommodating a write rotation speed range for recording in which range the highest speed is substantially 2,5 times the lowest speed, and the speed selector is arranged for selecting one of 4 speed settings for the read mode.

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7. Device as claimed in claim 1, wherein the device comprises a write buffer for storing information to be recorded, and wherein the mode control unit is arranged for switching the modes in dependence on a filling degree of the write buffer.

10 8. Device as claimed in claim 7, wherein the device comprises a video encoding unit for receiving video data and providing encoded video as information to be recorded via the write buffer.

15 9. Device as claimed in claim 7, wherein the mode control unit is arranged for recording a first continuous stream of real-time information via the write buffer and for, at the same time, retrieving a second stream of real-time information by alternating the write mode and the read mode.

20 10. Method of controlling a speed of rotation of a disc-shaped record carrier, the record carrier comprising a track for recording information,
the method comprising scanning the track via a head, retrieving information from the track via the head, recording information in the track via the head, switching the device either to a read mode or to a write mode, and setting the rotation speed of the record carrier,

25 characterized in that the method comprises selecting one of at least two speed settings for the read mode in dependence on an actual rotation speed of the record carrier during the write mode when switching from write mode to read mode, the difference in rotation speed between said actual rotation speed and the speed in the read mode being limited by said selection.